

A.I.D.'S EXPERIENCE WITH RURAL DEVELOPMENT:
PROJECT-SPECIFIC FACTORS AFFECTING PERFORMANCE

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The views and interpretations expressed in this report are those
of the author and should not be attributed to the Agency for
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FOREWORD

In February, 1988, the World Bank in association with the Expert Group on Aid Evaluation of the Development Assistance Committee of the Organization for Economic Cooperation and Development (DAC/OECD) sponsored the seminar "Rural Development Lessons From Experience." The seminar was attended by evaluation experts and rural development specialists from bilateral and multilateral development assistance agencies and private organizations. The meeting was particularly timely because a number of the assistance agencies had recently completed evaluations of their experience in rural development over the last 20-25 years. The seminar provided a unique opportunity for comparing notes on an area of major donor investment.

This paper was prepared for the seminar by the Center for Development Information and Evaluation (CDIE) of the Agency for International Development (A.I.D.). It is an excellent summary of A.I.D.'s experience in designing and implementing rural development projects.

For readers interested in pursuing this subject further, we recommend CDIE's Discussion Paper, "Rural Development: Lessons From Experience," prepared in collaboration with the World Bank's Operations Evaluation Department. The paper represents a synthesis of the seminar presentations and discussions and, in

large measure, reflects the views of all the participants. The overarching conclusion of the seminar, as noted in that paper, is as follows:

There was strong consensus that despite problems and setbacks, rural development efforts should be "praised not buried." Participants concluded that the basic objective of rural development -- improving the lives of the rural poor -- was still worthy of commitment by donors and that there were enough success stories to provide promise and direction for the future.

Also, we refer you to CDIE's Program Evaluation Report No. 19, A.I.D.'s Experience With Integrated Rural Development Projects (PN-AAL-095), and several CDIE project impact evaluations on specific rural development programs (see Bibliography).

The World Bank also has a major evaluation report, Rural Development: World Bank Experience, 1965-1986. For anyone actively engaged in the design and implementation of rural development programs, we believe these documents are essential reading. They should help us avoid some of the problems with earlier programs and, most important, give us richer insights into what works.

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1. INTRODUCTION

1.1 Purpose and Scope of the Paper

The purpose of this paper is to share with other members of the Development Assistance Committee donor community some of the Agency for International Development's (A.I.D.) experiences with rural development projects. Discussion is restricted to project-related factors that have been found to influence rural development project performance, defined in terms of project effectiveness, development impacts, and sustainability. That is, only factors usually considered within the control of project management or the donor agency are included, such as choices about management strategies and organizational structures, appropriate technologies, and project design, monitoring, and evaluation approaches. The paper excludes a direct discussion of factors external to the project (e.g., host government commitment and policy environment, sociocultural setting, and other country or international conditions that might influence project success), although it does discuss how project management might respond to

or influence these critical external factors. Also, the paper does not attempt to synthesize A.I.D.'s rural development performance record vis-a-vis its various objectives, a task that is also beyond the paper's scope.

Of course, a discussion of the design, technology, management, and information requirements of rural development projects still covers a lot of ground. In summarizing A.I.D.'s experience, the paper does not address the full complexity of many of the issues raised. Indeed, by contrasting key characteristics of alternative approaches to rural development projects, the paper at times consciously oversimplifies this experience in order to emphasize the lessons learned.

1.2 Definition of Rural Development

Rural development in the A.I.D. context has no distinct definition.^{1} Since the "new directions" legislation in 1973, A.I.D.'s mandate has emphasized directing assistance to the poor majority, which in practice has often been equated with targeting rural areas within developing countries because the bulk of the poor population in these countries resided in rural areas. The bulk of A.I.D.'s development assistance projects during the last two decades has been focused on improving the welfare of disadvantaged rural populations by improving their economic productivity and access to social services.

Because there is no explicit definition or consensus in A.I.D. concerning the scope of rural development projects, this paper rather arbitrarily decided on a broad definition that roughly corresponds to those activities falling within one of A.I.D.'s five functional accounts: agriculture and rural development. This account covers a variety of activities, including integrated rural development and land settlement; agricultural services such as credit, input supply, marketing and storage; irrigation, rural electrification, rural roads, and other rural infrastructure supporting agricultural development, and development of agricultural institutions of higher education and research; nutritional improvement; and agricultural planning and policy analysis projects. In other words, this paper concentrates on productive economic activities, not on the social service activities that have also most often been directed toward the rural poor majority. It is acknowledged, however, that social service activities also have a major role in a rural development strategy, and that the determinants of their success may vary considerably from those on which this paper focuses.

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¹ This paper was presented at the World Bank-hosted seminar, "Rural Development: Lessons From Experience," held on February 18-19, 1988 in Paris, France.

1.3 Information Sources

The issues, findings, and lessons presented in this paper are based on a selective review of A.I.D. evaluation studies of major project approaches to agricultural and rural development. Most of these evaluation reports are publications of A.I.D.'s Center for Development Information and Evaluation (CDIE). About 90 CDIE evaluation publications directly address aspects of A.I.D.'s experience with projects or programs in agricultural or rural development fields. Many of these publications assess the results of individual projects, while others synthesize and compare findings and lessons across a series of projects. They focus either on various subsectors, such as farmer credit, irrigation, rural roads, and integrated rural development, or on relevant crosscutting issues, such as development management, project design, or evaluation issues. Although this paper draws heavily on the findings and lessons found in these evaluation reports, the views and interpretations expressed in this paper are those of the author and should not be attributed to A.I.D.

A selected bibliography for further reference on A.I.D.'s experience with rural development project approaches and issues is included in the appendix.

1.4 Organization of the Paper

This paper is organized according to four key project related issues found to affect the performance of A.I.D. rural development projects: (1) project organization and management, (2) technology, (3) project design, and (4) project monitoring and evaluation.

2. PROJECT ORGANIZATION AND MANAGEMENT ISSUES

Most of the literature on management and organizational theory deals with the internal relationships of an organization. This literature has been of little value and has provided little guidance for management of rural development in the developing country context, where the keys to successful performance seem to have as much to do with factors and relationships external to the organization as those within an organization. Rural development projects are extremely dependent on their political, economic, sociocultural, and natural environments, which are typically in a state of flux and uncertainty. And, like it or not, rural development project activities are highly dependent for their successful performance on integration, or the coordination of a set of mutually complementary, interdependent activities. For example, the success of a credit activity may be dependent on the availability of an improved agronomic package, or the success of a rural road may be dependent on the existence of agricultural marketing opportunities.

Experience from A.I.D. evaluations and studies sheds light on some of the characteristics of successful managers of rural development in the context described above. Development managers

must have flexibility for making quick decisions and taking independent actions in response to unexpected and changing conditions. These managers require mechanisms for a two-way flow of information to the local field level and back: they must be in tune with the needs and perceptions of the intended beneficiaries--the rural households. Moreover, they not only need to focus their efforts on the project's short-term construction and production objectives, they also must be concerned with such issues as ultimate development impacts and longer term institutional capability and sustainability. Their operations should be cost-effective, reliable, and efficient and should be based on careful financial management planning. In addition, managers must have an entrepreneurial spirit to ensure the continuation of funds--whether from private revenue sources, donor assistance, or public budgets--to cover essential expenditures for maintenance of the development activity. Also, development managers need to be project "champions" or salespeople, effective leaders, negotiators, and coordinators, because the successful performance of their projects is frequently dependent on external policies or critical institutional linkages.

The following section examines how these general characteristics of effective rural development management may be related to the type of organization chosen for implementing projects.

2.1 A.I.D. Experience With Implementing Organizations

A.I.D. has experimented broadly with alternative organizational structures for implementing rural development projects, ranging from government agencies to semiautonomous units, private voluntary organizations (PVOs), cooperatives, and private commercial enterprises. Experience does not show any one organizational model to be superior or even a possible choice in all circumstances. On the contrary, evaluation reports contain examples of both successful and unsuccessful project performance with most of these approaches. The appropriate choice of organization for implementing rural development projects depends on numerous factors, including the project's objectives, scale, type of activity, and potential for profitability.

Some generalizations concerning the advantages and disadvantages of the various organizational structures typically used to implement A.I.D.'s rural development projects are presented next.

2.1.1 Projects Managed by Government Agencies

Projects managed by centralized line ministries are most appropriate when the aim of the project is to influence political or policy objectives. For example, agricultural policy planning projects are best implemented within national ministries. Also, ministries may be most appropriate for the development and maintenance of basic rural infrastructure, especially

large-scale, complex systems that are too costly for any but a taxing authority and too comprehensive in scope for any but a centralized bureaucracy. Also, public agencies may be necessary for projects aimed at protecting natural resources or for providing certain extension, technical, or environmental services that are collective responsibilities for the common good but that are unlikely to be provided for in the private marketplace.

Theoretically, projects implemented by government agencies have reasonable prospects for financial sustainability because such agencies are able to cover recurrent project costs from their budgets. However, experience indicates that the sustainability of such projects has frequently been a problem, especially in situations of fiscal crises and competing demands for public funds or when the implementing ministry has assigned a relatively low priority to the project's maintenance and support.

Public bureaucracies as implementers of rural development projects have certain well-known disadvantages. For example, government bureaucratic processes and regulations (checks and balances) make flexible decision-making and action in response to changing circumstances difficult. Red tape and corruption may reduce efficiency. Moreover, low civil service salaries make it difficult to attract and keep high-quality management and technical staff. Hierarchical management structures typically discourage two-way communication flows, limiting responsiveness to farmer needs and perspectives and sometimes inhibiting local participation in decision-making. Public agencies have tended to be ineffective in providing delivery mechanisms for agricultural inputs and marketing services to the farmgate. Projects with multisectoral components implemented by a lead line agency have had considerable difficulty achieving the required coordination with other compartmentalized public agencies.

Some projects have attempted to avoid such shortcomings by working with subnational government units rather than with national line ministries. The advantages of using such a decentralized approach have been greater cognizance of local conditions and needs, increased opportunity for local participation, and greater ability to coordinate multisectoral activities under one authority. However, these local government units typically have lacked high-quality staff, which has resulted in project implementation delays and inefficiencies. Moreover, they have been unable to handle large-scale, complex projects. They have also lacked authority to generate and expend revenue and thus have remained heavily dependent on line ministries for funding.

Some of these shortcomings could be ameliorated through decentralization projects that emphasize the development of high-quality local government staff. These projects could also support greater local fiscal authority through the devolution of budgetary allocation and disbursement responsibilities to the district level, or genuine decentralization of authority to raise and program revenue.

2.1.2 Projects Managed by Semiautonomous Agencies

Some rural development projects, especially integrated rural development projects, have attempted to bypass some of the shortcomings of government agencies by creating special project management units with varying degrees of autonomy from regular government procedures. By gaining more direct control over project funds and staffing decisions, these units were better able to attract high-quality management and technical personnel; react to unanticipated and changing environments with quick, flexible decisions; improve coordination of multisectoral activities; and effectively meet short-term construction and production targets. Because these units had government backing but were free of undue interference, in the short term they were able to achieve project objectives expeditiously.

However, the critical shortcoming of using semiautonomous units has been the inability to achieve long-term project sustainability and replicability. Further, the establishment of semiautonomous units has sometimes hurt the regular line agencies by attracting their staff, duplicating their functions, and creating underlying jealousies and competition. Frequently these units have relied mainly on expatriate staff management, which did little to develop indigenous institutional capacity. Once the external donor funding ended and the expatriate staff left, funding dried up, staff motivation and quality declined, efficiency suffered, and the autonomy of the agency typically was encroached upon by political influences. Because project management units were unable to assume recurrent costs, they quickly lost their independence after external project funding ended, and they became precariously dependent on line ministries for their survival. A.I.D. projects rarely planned for the smooth transition of project management units into line ministries.

2.1.3 Projects Managed by Private Organizations

A.I.D. has had considerable project experience in recent years working through PVOs. While these organizations vary greatly in their capabilities, making generalizations especially difficult, they have tended to excel in community-based project activities. PVO staff are frequently dedicated to social and humanitarian goals and are experienced in grassroots, participatory approaches. They often work in multiple sectors and can coordinate complementary activities at the local level. PVOs have been effective in undertaking experimental, innovative approaches and adapting flexibly to changing local conditions. However, PVOs often lack business management and technical sophistication, and the projects they manage may experience considerable implementation problems and delays, especially in dealing with A.I.D. reporting requirements and procedures. Further, PVO projects tend to be confined to small target areas and are not easily expanded or replicated. PVOs often have little leverage or influence with the host government and thus may be particularly susceptible to policy and regulatory

environments adversely affecting their performance. Also, their financial sustainability is often dependent on continued fundraising activities and external donor assistance.

A.I.D. has also supported cooperatives in rural development projects, particularly agricultural, marketing, and electrical cooperatives and credit unions. Cooperatives, based on the principals of voluntarism and democratic control, were often employed in A.I.D. projects in combination with other types of organizations to enhance local participation. The most effective cooperatives were those that were based on existing, indigenous organizations. The advantages of such organizations included their service orientation and the potential they offered for beneficiary participation. However, substantial difficulties often emerged when A.I.D. tried to develop independent, viable, and effective entities. Such cooperatives were often susceptible to control by government or local elites and were typically deficient in administrative and financial management skills.

A.I.D.'s policy emphasis in the last decade has been to encourage and facilitate involvement of the private commercial sector in rural development. Experience has confirmed that activities with the potential for generating a profit are best left to private entrepreneurs. In the past, some A.I.D. projects assisted in establishing public or semiautonomous (parastatal) agencies to perform tasks that displaced private entrepreneurs. This was particularly the case with activities that involved the distribution of agricultural inputs and services to farmers and the purchase and marketing of farmers' agricultural surplus. Because public agencies were ill-equipped to do these tasks, inefficiencies and unreliability resulted. Such activities which were a "replacement" of private sector activities, also created an additional unnecessary drain on scarce public resources. A.I.D. is now involved in programs to reverse this trend and to privatize parastatals where there is potential for profitability. A.I.D. has used nonproject assistance, including cash transfers, commodity import programs, and PL 480 assistance to support privatization and other policy reforms to make the environment more conducive to agricultural development and private enterprise growth.

A.I.D. has some experience in working directly with private enterprises to implement rural development project objectives. Opportunities for private sector involvement are especially high in activities involving interactions at the farm gate. For example, entrepreneurs have been particularly adept at providing high-quality and timely agricultural inputs, such as improved seeds, fertilizers, and pesticides, and in purchasing and marketing agricultural produce. Other advantages of the private sector include business management skills and entrepreneurial spirit of private firms, which lead to reliable, efficient, and cost-effective operations. Private management's natural interest in pleasing the client/farmers and their independence from bureaucratic procedures make them particularly responsive to local farmer needs and perceptions and to changing circumstances in the rural environment.

Furthermore, private sector activities are sustainable without continued donor or public sector assistance when there is long-term potential for generating sufficient revenues to cover expenses as well as to yield a profit. However, lack of profitability of project activities can be a major obstacle to the long-term success of such ventures. Moreover, the level of development of the private sector and the suitability of the institutional framework (rules, regulations, and controls) within which the private sector operates vary greatly among developing countries. A.I.D. has encouraged reluctant entrepreneurs into rural development activities by various means, such as by encouraging appropriate government policies, providing complementary infrastructure and services, and providing business capital through intermediate financial institutions, technical assistance, guarantees, and the like.

2.1.4 Conclusion

In summary, experience does not point to a simple answer indicating the superiority of any one organizational model for implementing rural development activities. Instead, the answer may lie in assessing the functions required in implementing a rural development project and then establishing an appropriate mix of organizations (or balance among them) that maximizes the advantages of each while minimizing their weaknesses. Even within single projects, a mix of organizational structures may be necessary for successful performance, although care must be taken to avoid a complexity that would result in insurmountable coordination problems. In many A.I.D. rural development projects, a key to success appears to have been the effective use of a combination of organizations, including local grassroots organizations and their participation in project management decision-making. The following subsections examine A.I.D.'s experience with these issues.

2.2 Local Participation in Management Decisions

A key finding from A.I.D. evaluations of rural development projects is the importance of some form of beneficiary participation in project management decisions for successful project performance and sustainability. The nature of such participation, however, has varied considerably. For many infrastructure projects, such as irrigation, rural roads, and electricity and water systems, the active involvement of local community organizations in infrastructure planning, construction, and maintenance decisions was found to be critical to project success and sustainability. For other rural development activities, such as provision of agricultural inputs, credit, extension, and marketing services, it appeared that a local organization was not essential as long as an effective monitoring was available to inform project management of the actual needs, preferences, and constraints of their client population, the farmers, vis-a-vis the project's products and services.

Moreover, project experience has made it clear that the intended beneficiaries' perceptions of the value of project services profoundly affected their utilization of the services. For example, farmers' perspectives on the timeliness and reliability of the services and considerations of affordability, ready access, and, ultimately, profitability and riskiness affected farmers' decisions to adopt new agronomic technologies and practices.

2.2.1 Local Organizations

With regard to infrastructure projects, experience indicates that the central agencies that typically constructed rural infrastructure did not have the recurrent budget to maintain it properly, or perhaps more accurately, that central agencies gave operation and maintenance low priority relative to new construction. Donors have probably supported this attitude by being more forthcoming with assistance for new construction or rehabilitation than for operation and maintenance costs or for organization. The result was that too frequently rural systems fell into disrepair, providing unreliable services to farmers, who in turn would attempt to reduce their dependence on and use of these modern technologies.

Successful and sustainable projects were frequently those that placed the responsibility for operation and maintenance clearly on community-based organizations, user groups, cooperatives, or the like. However, responsibility for operation and maintenance can only be successfully devolved if some concomitant control over service provision is also devolved. Timing of involvement is also important. For example, user associations were most effective when they were established in the early phases of the project and had a voice in planning and implementing such decisions as choice of technology, physical design and location, allocation, maintenance and repayment policies, and other decisions that made the project appropriate from their perspective. Through such early beneficiary involvement in planning, costly mistakes were frequently avoided by ensuring fulfillment of the community's perceived needs, thereby increasing service utilization and providing motivation for maintenance. In some cases, the centralized authority belatedly tried to transfer maintenance responsibilities and costs to the community after construction was completed. This often failed because communities did not value the infrastructure or service and did not consider its maintenance to be their responsibility.

Establishing effective local participatory organizations was not always easy, and attempts frequently failed. Where possible, building on existing, indigenous institutions was preferable to trying to establish new organizations. Timing was important, given that it took much longer to develop local organizations than to build infrastructure. Typically, A.I.D. project designers assumed that simply forming local organizations would be enough; thus projects did not devote the time, attention, resources, training, and management priority necessary

to make the organizations effective.

Some of the conclusions and lessons from experience concerning the successful development of local participatory organizations include the following:

- Organizations need to be given clear, ongoing responsibilities and authority.
- Organizations' involvement in projects may include provision of labor and materials for constructions.
- Organizations require training in repair and maintenance techniques, basic financial accounting and user-fee schemes, and simple organizational and administrative techniques.
- Where possible, building on existing indigenous institutions is preferable to building new organizations.
- Representation by all minority groups in the target area should be encouraged to avoid takeover of the project by local elites.
- Organizations should be involved in the earliest phases of the project in order to contribute to important management decisions on such issues as the choice of technology, location, access to and allocation of resources, and user-fee arrangements.

2.2.2 Beneficiary Perceptions and Feedback Mechanisms

For other types of rural development projects, the active organization and participation of farmer/beneficiaries in project decision-making did not appear to be essential to project success. However, in all projects a more limited, passive form of beneficiary participation was critical: project management needed reliable information about the intended beneficiaries' needs and perspectives as a basis for their operational decisions.

For example, for agricultural services projects, successful performance required that management be regularly informed of client/farmers' perceptions concerning the reliability, riskiness, timeliness, and affordability of the various agricultural inputs and services required to adopt new agricultural practices and -- most important -- the profitability of the new practices. To this end, A.I.D. has increasingly encouraged project managers to use rapid rural appraisal information-gathering techniques to increase their understanding of the perspectives, needs, and constraints of their intended beneficiaries. These techniques involve ongoing application of practical, low-cost, quick-feedback approaches to gathering information about client populations, including focus group and community interviews, mini surveys, and discussions with key informants. Social marketing projects

go a step further and use mass-media advertising techniques to attempt to change client attitudes toward project goods or services and to stimulate demand.

The private sector has been very effective in tailoring its products and services to the needs and desires of its clientele. Private firms must be effective in meeting and stimulating demand to stay in business. In fact, many of the rapid rural appraisal and social-marketing approaches used by A.I.D. are borrowed from private sector market research and advertising techniques.

A.I.D.'s agricultural research and agricultural higher education project experience also confirms the need to understand the conditions and range of factors facing the farmer if the project is to make an impact. More institutional linkages and two-way information flows between agricultural higher education and research institutions, extension agents, and farmers could improve the farmer orientation and relevance of research activities. Also, more testing and adaptation of new technologies at the local field level within a farming systems research framework can increase the relevance of agricultural research to actual farming conditions.

2.3 Management Strategies for Improving Project Performance and Sustainability

Experience with the management of rural development projects offers several key lessons concerning the broad range of responsibilities and skills required of project leadership. Aside from the obvious responsibilities for meeting short-term construction schedules and production targets, experience suggests that management needs to focus on two other aspects in order to achieve successful project performance and sustainability

First, there must be a concern for whether the project is likely to achieve its ultimate development impacts, and if not, why not. Various changes in policies or other unanticipated external conditions may be constraining the achievement of the project's ultimate rural development goals despite successful achievement of intermediate project implementation targets. To effectively deal with such situations, project managers responsible for implementation must have the flexibility to adapt project targets and strategies to changing conditions. Project managers must also have the capability to influence those external conditions by developing cooperative interagency linkages and interpersonal relationships with important actors whose actions may influence project outcomes and impacts.

Second, development managers should look beyond the short-term objectives of the project to consider the best strategies for achieving longer term sustainability of the project's services and benefits after donor assistance ceases. To achieve sustainability, attention has to be paid to such issues as the development of indigenous institutional capability and the

achievement of self-sufficiency of the project's human and financial resources.

2.3.1 Management Strategies for Addressing Internal and External Problems

Managers of rural development projects have typically faced serious internal organizational and staffing problems, such as high staff turnover, low public sector salary scales, low morale and minimal performance incentives, and lack of funds for support equipment, supplies, and transportation. Such obstacles as counterproductive organizational cultures, graft and corruption, and bureaucratic red tape were also often encountered. Yet successful development management required more than effective supervision and motivation of employees within the implementing organization. It also required an external focus on coordination and interaction between the project and other organizations with related and interdependent functions. It required an ability to motivate and influence these other actors, to develop external support for project goals, and to manipulate external policies, factors, and conditions that affect project performance. Effective managers required a flexible style and independence in order to adapt project targets and strategies in response to unanticipated or changing external conditions and constraints.

2.3.2 Management Strategies That Enhance Indigenous Institutional Capacity

In the past, an overemphasis on achievement of short-term implementation and production targets encouraged adoption of such project strategies as providing massive technical assistance or creating specialized autonomous agencies. Although such strategies improved short-term performance, they may only have delayed management problems and may even have inhibited the development of a sustainable indigenous institutional capacity.

For example, heavy expatriate involvement in project management sometimes created friction and jealousies among government officials and hampered smooth project takeover by indigenous staff. Timing or scheduling problems further inhibited a smooth transfer process. Too frequently, counterpart staff were away on long-term training during most of project implementation and thus missed valuable opportunities for on-site training and interaction with expatriate technical advisers. Evaluations often advocated preproject training of counterparts to overcome this timing problem. However, in practice such training has been constrained by the way A.I.D. obligates funds. Another frequently mentioned lesson is the importance of providing counterparts with management as well as technical training, an acknowledgment of the management responsibilities typically assigned to returned participants.

2.3.3 Management Strategies for Improving Financial Viability

Experience indicates the importance of early management planning for the longer term financial viability of project activities. Evaluations of some types of projects, such as agricultural research and higher education projects, indicate that the financial viability of the institution can be enhanced by the management's entrepreneurial spirit; that is, by management's ability to go out and sell their program's capabilities and services to other rural development agencies and to donors and thus develop further funding sources or contracts in support of their longer term efforts.

Also, A.I.D. has instituted a policy requiring host country agreement before project termination on a plan for handling recurrent costs. This, too, is an outgrowth of A.I.D. experience. It is especially important in projects that are exclusively within the public sector.

Another strategy advocated for rural development projects is that of recovering all or some of the costs of project products and services from client users. Although complete cost recovery has rarely been possible, there has been considerable successful experience with recovery of operating and maintenance costs of rural infrastructure and the costs of various agricultural inputs and farmer credit.

Experience with user-fee schemes for rural infrastructure has provided the following key lessons:

- User fees are often effective in covering operation and maintenance costs, but they are rarely able to cover amortization of construction costs or the costs of certain collective expenses -- for example, the costs of drainage or watershed protection in irrigation systems.
- Collection is more feasible when users perceive the infrastructure to be reliable and timely and consider its use more profitable than using traditional systems.
- Cost-recovery schemes are more effective under decentralized management; that is, when collection and expenditure authority is handled at the community level.
- User-fees are more effective when the intended users are actively involved in early planning stages and are able to influence the design of the infrastructure and the structure of the user-fee scheme to accommodate users' needs.

Similarly, achieving financial viability for rural credit institutions and credit schemes has also been possible under certain conditions. Key lessons included the following:

- Interest rates charged for credit must be sufficient to cover the costs of capital plus the credit agency's

administrative costs.

- Loan procedures should be kept simple and timely to attract small farmers and microentrepreneurs and to reduce administrative overhead costs.
- To achieve viability, credit programs must be accompanied by a favorable rural development policy environment and an appropriate technical package that can result in a net profit for the borrowing clients.
- Programs that include rural savings mobilization strategies can generate additional resources for on-lending, thus contributing to the financial self-sufficiency of rural credit institutions.

Recently, A.I.D. strategies for improving the financial viability of projects have also included support to private businesses for the provision of improved agricultural inputs. For example, in several cases A.I.D. has successfully supported the development of private sector seed and fertilizer industries in developing countries. By removing various constraints and providing initial support, A.I.D. has been able to assist some of these firms to get established and to sustain their growth, resulting in efficient and relatively widespread accessibility and adoption of improved agronomic practices.

Although strategies for shifting project costs onto the intended user may well be necessary for the long-term financial sustainability of many rural development institutions, infrastructure, and services, there are certain problems with the approach. For example, there is an ethical issue involved in trying to shift much of the financial risks involved in the adoption of new, untested agronomic inputs and services onto the farmers. Experience has unfortunately taught us that many of the "improved" technical packages and agronomic practices advocated by rural development projects proved to be risky and unprofitable for the adopting farmers. Project planners frequently over-estimated benefits in design documents. In such cases, shifting the costs onto farmers close to the subsistence level could result in financial ruin, hunger, and suffering for the intended beneficiaries. A possible solution to this dilemma might be more testing of the project activities on a small, experimental scale first, while perhaps providing some form of guarantee against excessive losses for farmers willing to participate in the experiment. Only then would a second phase, based on the successful pilot, call for widespread extension of the technology and cost-recovery schemes requiring the farmers to bear the financial risks.

3. TECHNOLOGY ISSUES

3.1 Availability and Adoption of Appropriate Agronomic Technical Packages

New technical packages were at the core of most rural development projects. The packages typically included some combination of new agricultural inputs and practices, such as improved seed varieties, fertilizers and pesticides, irrigation water, and more intensive labor practices. Often various supporting activities, such as credit and extension services, road construction, and marketing facilities were included in the project. The additional agricultural yields and farmer incomes expected to result from adoption of these new methods were projected in rural development project designs to justify the additional costs.

In retrospect, the project plans were often over-optimistic about the benefits of available technologies. Although striking biological improvements were made for high-yield varieties of wheat, maize, and rice for irrigated agriculture, particularly in Asia, no similar breakthroughs have been made for rain-fed agriculture. Recent CDIE studies of small-farmer perspectives on rural development also suggest that nonfarming economic opportunities may be as important to rural households as are farming improvements.

Also, there was frequently a large gap between performance of a new technology under lab research conditions and practice at the farm level. Recommended project technical packages were too rarely properly tested in actual farm field conditions and analyzed from a multidisciplinary perspective before widespread promotion. There are many examples of technologies that achieved impressive results but that were not adopted by farmers as expected. Farmer awareness of the technology was rarely the issue; rather, other factors influenced farmers' decision to adopt a new technology:

- Unreliability of the delivery systems, infrastructure services, or marketing facilities
- Increased farmer dependence on external inputs and services and the consequent increased risks involved in adopting new technologies, which subsistence-level farmers calculated they could ill afford
- Agricultural policies that resulted in low market prices for agricultural commodities and high costs for agricultural inputs, resulting in low or negative profitability for farmers adopting the new techniques
- Lack of access to, or inability to afford, the labor, capital, and other resources required for adoption of the new technology
- Inconsistencies between demands of the new practices and traditional lifestyles, land-use practices, and cultural systems

3.2 Choice of Appropriate Rural Infrastructure Technologies

Evaluations of rural infrastructure projects, such as irrigation, rural roads, and potable water systems, reveal a variety of findings and issues concerning appropriate technological choice. Too often such projects concentrated on technical hardware and construction issues while avoiding management and socioeconomic contextual concerns affecting the infrastructure's ultimate performance and impacts. Large, complex, and expensive systems were often simplistically equated with desirable modern and efficient approaches. Pressures within A.I.D. to use U.S. based technologies and to "move money" quickly added to this bias. In fact, such sophisticated technologies often turned out to be inappropriate to local farming conditions and needs.

Evidence from irrigation projects is mixed concerning the relative efficiencies and appropriateness of large, complex systems and of smaller, community-based systems. In general, the larger systems had the disadvantage of creating greater dependence on external sources for operation and maintenance funding, repair skills, and spare parts. Also, the larger irrigation systems were typically managed by centralized public agencies, which minimized local participation with consequent negative implications for performance and ultimately for sustainability. Centralized management typically chose technologies that, from the perspectives of local users, were inappropriate, and these agencies were often unable or unwilling to fund operation and maintenance costs.

Community-based, participatory management approaches that involved the intended users in decision-making generally resulted in the adoption of more appropriate technologies tailored to the users' perceived needs, greater motivation for maintenance among user communities, and simpler systems that could be operated and maintained with local skills, materials, and funding. In sum, the appropriateness of the technology was less an issue of scale and complexity than of the accompanying management system and of whether that management was decentralized enough to enable local participation in technical and design decisions.

Furthermore, expensive irrigation technologies had the disadvantage of virtually requiring adoption of the most advanced forms of agronomic technologies so that yields would justify the costs of the infrastructure. Adopting farmers were subject to high risks because of the resulting increases in their debt burdens and the technology's dependence on a variety of external agronomic inputs and services requiring a high level of precise coordination, timing, and reliability for success. These technologies also resulted in high recurrent cost burdens.

Similar findings emerge from evaluations of rural road projects. A.I.D., as well as recipient governments, often viewed the more expensive and less economically justifiable heavy equipment-based road construction technologies as modern, prestigious, and desirable. A.I.D. interests in reducing management and supervisory requirements intensified this bias and moved the Agency further away from more appropriate labor-based

technologies for rural road construction. Centralized implementing agencies tended to select the more expensive construction approaches, whereas the more decentralized institutional arrangements involving local participation in technological decisions resulted in more appropriate and economical labor-based technologies. Also, central agencies tended to favor new road construction and ignore maintenance of existing roads. Sustainable roads typically depended on the ability and willingness of local communities to do the repair work, which was facilitated in cases in which the roads had been constructed using the labor-based technology approach.

Although evaluations of rural potable water systems found that simple technologies were not always best in all situations, in general they warned against overly complex and expensive systems that were dependent on foreign parts and fuels and encouraged the choice of simple, durable systems that could be funded, operated, and maintained locally. Centralized agencies had poor track records for financing the operation and maintenance of rural water systems, whereas community-based systems with localized responsibilities for operation and maintenance achieved greater sustainability. Further, evaluations showed that incorporating the preferences and desires of the community in the choice of technology and project design greatly enhanced the appropriateness and value of the technology to the community and increased its chances for sustainability. In this context, even simple technologies sometimes failed when the intended users did not perceive them to be a significant improvement over traditional water sources. The key to appropriateness of the technology was not so much its complexity or simplicity as its perceived and actual value to the community -- enough to encourage local use, payment, and maintenance of the new water system.

There is yet another dimension to the selection of an appropriate technology that has become of increasing concern to A.I.D.: the long-term impacts of the technology on the environment and the implications for sustainable agricultural productivity and human health and welfare. The adverse environmental impacts of irrigation systems when drainage and watershed management are ignored are well known and documented. The longer term environmental damage resulting from excessive pesticide and chemical fertilizer use is also of growing concern. However, while A.I.D. has relatively extensive procedures for preproject environmental assessments, the monitoring and evaluation of actual project impacts on the natural resource base has been sadly lacking in most cases.

In summary, the following key lessons emerge from rural development project evaluations concerning the choice of appropriate technologies:

- Technological adoption must result in profitability for the intended beneficiaries; improvements in yields and production are not enough if the increasing costs of inputs and unfavorable agricultural pricing policies overshadow these gains.

- Because adoption of new technological packages typically increases the farmers' dependence on a variety of external inputs and services, these technologies must be highly reliable, timely, and affordable for adoption by risk-averse, subsistence-level farmers; approaches should be developed that minimize the risks of adoption by poor farmers and that limit the changes in lifestyle and practices required.
- New agronomic technologies should be thoroughly field tested in actual farming conditions. An interdisciplinary perspective should be taken in analyzing the appropriateness of the technology, by examining the technology in the context of the economic, social, and cultural factors influencing ultimate performance. Performance must be judged in terms of farmer incomes and welfare and not just hardware issues or agronomic yield potential. The testing, pilot phase should start on a small scale and expand only when a technology has proven successful. Technology choice should therefore maximize flexibility and enable mid-course corrections and further adaptations as indicated by results of the initial test phases.
- The size and complexity of rural infrastructure technologies usually have implications for the degree of centralization of management structure and for the level of dependence on external sources for operation and maintenance skills, parts, and funding. Smaller, community-based systems have the advantage of facilitating local participation in technical design decisions and maintenance responsibilities, resulting in systems that, from the users' perspective, are more appropriate and valued and thus worth maintaining. Smaller, less complex technologies are also likely to be easier to maintain using local skills and parts and less expensive to operate, thereby ensuring greater system reliability and sustainability. However, the new system must be viewed by the intended users as an improvement over traditional technologies, otherwise it will not be valued, used, or maintained by the local population. Large-scale, complex systems can be made effective if ways can be found for including some decentralized management and local participation in technological design and maintenance decisions.
- More emphasis should be placed on developing indigenous institutional capacity for upgrading and adapting available technologies to local conditions and for interdisciplinary applied research that analyzes the appropriateness of technologies from local, economic, social, and environmental perspectives.

4. DESIGN ISSUES

Donor modes of operation and procedures can adversely affect project performance if they clash with the realities of the developing countries' rural environmental context. This has especially been the case with A.I.D.'s traditional project design procedures, which tended to emphasize a fully structured blueprint approach; large-scale, complex multicomponent designs; and short project lifespans. In recent years, a growing realization of the unpredictability of the rural environment, the complexity of factors affecting project outcomes, the difficulties of institutional coordination, and the long-term nature of the rural development task have led A.I.D. to experiment with alternative design techniques. However, experience with some of these alternatives suggests that they are also not without problems. It is suggested that appropriate project design procedures may lie in finding a balanced rather than an extreme approach.

4.1 Design Flexibility

Traditionally, A.I.D. project design procedures emphasized detailed planning, clear specification of production targets, well-defined implementation schedules, and quantified projections of project costs and benefits. This very structured approach to project design, which was adapted from capital project design requirements and became known as the blueprint approach, was found, in retrospect, to be too rigid and inflexible, given the many unknowns and the unpredictability of the rural environment. Although few A.I.D. projects were completely rigid, the limited flexibility of blueprint designs was particularly inappropriate for integrated rural development projects, whose multicomponent nature multiplied the number of external, unpredictable factors on which they depended for success. However, even evaluations of single-sector rural development projects, such as irrigation projects, refer to the need for greater design flexibility to allow for the complexity and uncertainty inherent in rural development efforts.

A.I.D. project design documents were to some extent "sales" documents prepared with the approval process in mind. Project costs were typically underestimated, while implementation schedules and projections of benefits were frequently over-optimistic. Critical assumptions about external factors that might constrain project performance were sometimes downplayed in an effort to gain project approval. These tendencies in the project design and approval process later created problems and misdirections for project management. Tied to strict implementation schedules and evaluated on the strength of their performance on specific, short-term construction and production targets, project management was often straight-jacketed into inappropriate actions and emphases in a constantly changing rural environment. For example, in an integrated rural development project in Liberia, management continued to promote coffee and cocoa production in order to attain production targets specified in the design, despite declines in international prices that made

these commodities unprofitable for farmers. The rigidity of the design process made mid-course corrections and redesign efforts difficult. Because of project design emphases on short-term performance and specific outcome targets, project management tended to ignore important longer term concerns for developing institutional capacity and sustainability.

In a response to this experience, A.I.D. has tried innovative project designs that allow greater flexibility and autonomy for project management. These flexible designs, sometimes referred to as "rolling-plan" or "process" designs, tend to have broader, less-specific goals that emphasize development of an institutional capacity to continue a stream of benefits after donor assistance has ended. They also have less structured plans for activities and implementation schedules. Emphasis is on a project approach of experimentation, learning by doing, adjusting to changing conditions and constraints, and problem-solving. The approach usually emphasizes building institutional capacity for managing this learning process and coordinating closely with the intended beneficiary population. Furthermore, these flexible, rolling-plan designs have usually involved a phased approach, starting out small, testing and experimenting with project ideas and activities, and then expanding as the approaches prove successful. Specific activities and funding are not predefined for the life of the project, but are developed on a rolling-plan basis. Often, specific activities and targets are defined annually within the broad overall institution-building objectives of the project.

The distinction between rolling and process designs is that in rolling designs, the objectives are usually relatively clear but the means for accomplishing them are not specified. Process designs, a variant of rolling designs typically used in institution-building projects, are not only open-ended about how projects will achieve their objectives, but also about project purposes.

However, this project design approach, while more appropriate to the rural development context, has not been problem-free. The lack of clearly defined project objectives, activities, schedules, and funding commitments can lead to confusion, disagreements, and inaction, as well as to design, implementation, and funding delays. A review of flexible process design projects in the Philippines found that they take longer to design, are slower in fund disbursement, are more staff intensive, and require greater administrative capability and support compared with more traditional project design approaches.

A recent analysis comparing A.I.D.'s experience with the flexible design approach with its experience with the more traditional blueprint approach concluded that flexible approaches had the following advantages:

- Offer an approach for addressing development problems about which little is known

- Can deal with highly unstable project environments
- Facilitate the testing of alternative schemes and technologies
- Allow for more experimentation with alternative modes of operation and organization
- Shift attention and resources from elaborate design exercises to project implementation and redesign efforts

However, initial experience also cautions that flexible designs may have certain disadvantages, including the following:

- Are slower to implement and to disburse funds
- Require more staff-intensive efforts by A.I.D. and host countries
- Are more adversely affected by staff turnover
- Require greater administrative capability and support on the part of the host country
- Increase the ad hoc nature of decision-making and possibilities for misunderstanding between A.I.D. and the host government
- May add to the complexity and duration of a project
- Make the project more vulnerable to possible cutbacks because of the designs' open-ended nature

In conclusion, although A.I.D. project designs have tended to be overly rigid for most rural development project approaches and conditions, the flexible design approach has also encountered problems and may not be appropriate in all instances. It is therefore suggested that a balance between the extremes of the flexible design approach and the blueprint approach should be strived for, to attain one that tries to maximize the advantages of both approaches while minimizing the disadvantages. Several key factors might help guide decisions concerning the degree of flexibility/specificity appropriate for a given project, including (1) the degree to which the development problems addressed by the project are understood, (2) the degree to which the project environment is subject to change and unpredictability, and (3) the management capabilities of the host government and the USAID Mission. More flexible designs appear appropriate in situations in which little is known about the development problem and implementation strategies are difficult to determine in advance, considerable change is anticipated in the project environment and frequent redesign is expected, and both the host country and A.I.D. have sufficient management capacity to handle the additional staff requirements. Situations in which the converse is true would argue for more traditional structured

design approaches.

The type of project appears to be less of a factor in determining design approach, although an argument can be made that more complex, multicomponent projects, such as integrated rural development projects, will require greater flexibility at least in some project components, than might be true of more narrowly focused, single-activity projects.

Despite the dichotomy often drawn between the traditional structured approach and the flexible design approach, it is frequently argued that A.I.D.'s rural development projects would be more effective if the two design approaches were integrated. Also, A.I.D. should undertake more small, short-term, flexibly designed pilot projects. Their small size would minimize management problems while their flexibility would improve the chances for finding appropriate solutions to little-understood development problems. Further, small pilot projects would enable testing of alternative project approaches and technologies before major investments were made in full-scale projects.

Also, experience indicates that a process approach emphasizing technical assistance and institutional capacity development is appropriate in the initial phases of rural development efforts, to be followed by larger infusions of capital once the organization's absorptive capacity and capabilities have been established.

4.2 Project Size

Pressures within A.I.D. to obligate and disburse funds within fiscal-year constraints have sometimes resulted in inappropriately large-scale projects in situations where pilot projects would have initially been more suitable. Experience has taught us that most rural development projects would benefit from an approach that starts out small, testing the feasibility and appropriateness of the project approach and technologies within the local context, and only then expands into larger scale efforts.

Starting off with large, expensive projects has led to a variety of problems, including the following:

- Increased management problems in USAID Missions and host country agencies that are stretched beyond their absorptive capacity
- Greater likelihood for corruption and power struggles over the large resources involved
- Potentially greater problems in trying to sustain project services at the level provided during project implementation
- Increased use of centralized public agencies for

implementation with less likelihood of local participation

- Greater likelihood of choosing inappropriately expensive, sophisticated technologies that cannot be maintained
- Greater likelihood of project complexity, with many components thrown together, only a few of which can be properly implemented

Trends in A.I.D. toward smaller overall budgets and increased emphasis on nonproject assistance should relieve some of the pressures to implement large-scale projects. It is suggested that A.I.D. might take better advantage of these trends by encouraging more use of pilot projects, especially in innovative areas about which little is known, following these with larger scale projects if the pilot project is successful. Alternatively, more use might be made of longer term, phased projects with initial small-scale testing phases followed by slow expansion and increased disbursements over time.

4.3 Project Lifespan

A related design issue concerns project duration. The lifespan of most rural development projects has been too short to produce meaningful results that could be sustained over time. In particular, integrated rural development projects, because of their multisectoral designs, required more time than did single-sector initiatives. The typical A.I.D. project lifespan of 5 to 7 years has been found to be far too short for projects emphasizing institutional development, such as agricultural higher education and agricultural research.

Most rural development projects encountered the typical constraints and shortcomings that arise from a short project time frame. Projects usually required a few years to establish foundations and produce some tangible results. Unfortunately, because of the typical, short project lifespan, just as projects were gaining momentum, their funding stopped and so the projects were often unable to consolidate their gains. Typical problems compounded by the pressure of the short time frame of A.I.D. projects included the following:

- Long delays caused by A.I.D. contracting procedures, resulting in project implementation getting off to a slow start
- Insufficient overlap between project counterparts, who were away on long-term training during the initial period of the project, and the technical assistance team, thus lessening the effectiveness of institution-building efforts and the transfer of knowledge
- Too much emphasis on the full-scale production aspects of the project at the expense of initial testing or pilot phases and the devolution phase that focuses on

turning project production activities and financing over to the indigenous organization

In conclusion, two approaches are suggested for meeting the need for longer term efforts and solutions for most rural development activities. Project time frames might be lengthened from the current 5- to 7-year limit to more realistic 15- to 20-year endeavors. Such long-term projects should be implemented in distinct phases, each building on the experience, knowledge, and progress made in the preceding phases and responding to the changing environmental conditions and institutional needs and emphases. Alternatively, but not so dissimilarly, a series of related follow-on projects could be undertaken in support of the same objectives and institutions. For example, an initial pilot project might be followed by a larger scale "production" phase that would emphasize expanded delivery of project goods and services and attainment of specific targets. That phase might then be followed by a phase emphasizing achievement of sustainability of the project's services and benefits through a strategy of improving the capacity, human resources, and financial viability of the indigenous institution.

4.4 Project Complexity and Integration

The awareness of a need to "integrate" related rural development activities emerged from A.I.D.'s experience with the narrowly focused, single-component projects that were typical in the early 1970s. Such project activities were failing to achieve their desired development impacts because of lack of complementary and interdependent inputs and services. For example, irrigation project evaluations found that performance was often related to the availability of factors and services unrelated to irrigation, such as credit, an improved agronomic technical package, extension services, marketing systems, electricity, and rural roads. Similar findings emerged from reviews of A.I.D.'s experience in other subsectors. For example, a review of farmer credit projects concluded that such projects were meritorious only if linked with an improved agronomic package. Evaluators of agricultural research projects argued that research could be adopted only if the necessary agricultural inputs, extension, and support services were available to farmers. A report on experience with rural roads projects argued that a single-sector rural roads project should be undertaken only in cases where complementary services necessary for agricultural growth already exist and where lack of roads is the dominant bottleneck. Where complementary services are not available, the report recommends that roads be constructed only as part of larger integrated rural development projects.

These perspectives, plus other pressures, led to a growing emphasis in the late 1970s and early 1980s on multicomponent, multisectoral integrated rural development projects. Other factors within A.I.D. that favored the integrated rural development project concept included the pressures to obligate funds and the perceived advantages, in terms of minimizing design and

management efforts, of lumping many activities under one project.

A.I.D.'s experience with integrated rural development projects points to serious management and coordination problems resulting from their complex, multisectoral approach. For example, attempts to integrate a variety of activities and services in integrated rural development projects often required the development of coordination mechanisms among the different ministries and agencies responsible for various project activities. In particular, where large target areas and multiple activities in different sectors were involved, the resulting coordination problems often proved insurmountable. Achieving effective coordination among different ministries was typically very difficult within the bureaucratic structures of developing countries, structures that tended to be highly compartmentalized, isolated, and unaccustomed to coordinating activities or sharing funding. Competition for project funding often resulted in disbursement and implementation delays, especially if the lead agency was a sectoral line ministry.

Attempts to integrate multiple rural development activities within a project encountered other problems besides the overwhelming problem of coordination. Because of their complexity and the pressures of multiple activities, such projects often encountered serious management and administrative constraints and a lack of appropriate interdisciplinary skills. The short time frame of the typical A.I.D. project was particularly unsuited to attempts to achieve results in multiple project activities. Also, the rigidity of the traditional design approach was inappropriate for these multicomponent projects.

As these grave problems with integrated rural development project approaches became well known, A.I.D. reverted to simpler, more focused projects. However, these projects are designed in the context of a larger rural development strategy that gives designers a broader frame of reference and allows them to include essential relationships while maintaining a manageable level of integration. Today, some A.I.D. projects still might have several components, but they are now generally limited to strongly related, interdependent production activities within a single sector. Agricultural production-oriented activities are now rarely mixed with general social service activities, as they once were in integrated rural development projects.

Even for development projects divided into more manageable units, the underlying concept of integrating and coordinating functionally related activities is still valid and necessary for achieving successful, dynamic rural development. It should not be forgotten how many single-component projects failed to achieve their potential impact because necessary complementary services or infrastructure was absent. Difficult though it may be to achieve, integration of related rural development activities is essential at some level.

A solution presented in a recent review of A.I.D.'s integrated rural development experience suggests that the necessary

planning, coordinating, and integrating of related rural development activities be achieved at the strategic planning level rather than at the individual project level. Instead of attempting to include all complementary activities under one project umbrella, various related, narrowly focused projects could be initiated in an appropriate sequence within an overall rural development plan. More modest projects could be independently managed by different agencies, and so would require minimal interagency coordination. Many of the problems of interagency coordination, project management constraints, short project lifespan, and inflexible designs encountered by integrated rural development projects can be avoided or mitigated by addressing the requirement for integration at the strategic planning level rather than at the project level. Also, by tying agricultural and rural development policy reform discussions with the host government to broader, longer term assistance strategies rather than to individual projects, this approach may increase A.I.D.'s influence in such policy dialogue.

The implications of these findings for A.I.D.'s country strategic development planning are that more consideration might be given to the interrelationships among various rural subsectors, that is, to understanding the linkages, dependencies, and appropriate sequencing of related project activities within the target rural area. With the growth of nonproject assistance and policy reform conditionality provisions, more attention might also be required at the strategic planning stage to making this new mode of assistance complementary to and supportive of project efforts. Not only can project performance be made more effective via supportive policy reforms, but difficult policy reform conditions may be facilitated by various supportive project activities.

Furthermore, A.I.D. might also attempt to improve host country capacities for this type of strategic, integrated planning of rural development activities. A.I.D. has had considerable experience in supporting agricultural planning and policy analysis projects. A review of these project experiences shows that while A.I.D. has had considerable success in building indigenous capacity to plan and analyze policy issues, these policy and planning units have been less successful in fostering policy reforms.

A recent review of A.I.D.'s agricultural higher education projects concludes that there is a strong need for national-level agricultural strategic planning that emphasizes an integrated approach to interrelated agricultural activities (especially education, research, extension, and farm inputs) that allocates resources based on a common program agenda and that strengthens essential interagency linkages and coordination. The evaluation found that many institutions of higher agricultural education currently have limited effectiveness in achieving rural development objectives, in part because of their isolation and fragmentation.

There is also a need for greater integration of various

donor activities within a coherent, overall rural development strategy at the country level. Donors could thus reduce duplication and competition for activities that are in vogue and instead complement each other's efforts.

It should be noted, however, that there may be some cases in which integration of various activities at the project level may still be desirable, for example, in narcotics, resettlement, or politically sensitive border area projects where it is important to have a concentrated area development effort that can produce quick and significant results. An integrated rural development approach may also be appropriate in projects designed to build or strengthen local institutions whose purviews frequently involve a variety of activities and sectors. In cases where an integrated rural development project approach is still advocated, experience indicates that the effectiveness of the approach may be facilitated by taking the following steps:

- Limiting the target project area to a relatively small, manageable geographic area
- Limiting the activities to be coordinated to those with strong functional relationships and complementarity
- Concentrating first on productive, income-generation activities and phasing in social service activities only at a later stage
- Choosing an implementing agency with centralized authority over and expertise in the various sectors and activities

5. PROJECT MONITORING AND EVALUATION ISSUES

In Section 4, it was argued that donor modes of operation may affect project performance if they clash with the realities of the developing country's rural context. It was pointed out how various aspects of A.I.D.'s traditional project design procedures were unsuited to the unpredictability of the rural environment, the complexity of factors affecting project outcomes, and the long-term nature of the rural development process. These same contextual factors clashed with aspects of A.I.D.'s early monitoring and evaluation procedures and forced a reconsideration of the appropriateness of project evaluation approaches and practices.

For example, early evaluation guidance in the 1970s emphasized the use of formal, statistically rigorous evaluation designs that were better suited for controlled laboratory experiments than for real life in rural areas. The rigor, complexity, high cost, and relatively narrow focus of these experimental designs were also ill-suited to the information needs and resources of project managers, who needed quick, low-cost, and flexible feedback techniques on a wide variety of evaluation

issues and problems as they occurred. The lack of evaluation techniques appropriate to the project managers' needs meant that in most cases, little impact-oriented evaluation took place during project implementation. Project management's focus on narrow monitoring issues and their lack of timely information on intended beneficiaries' perceptions of and reactions to projects often resulted in poor project performance and minimal impacts.

A closer examination of A.I.D.'s experience with conceptual, methodological, and organizational aspects of the evaluational process for rural development projects follows.

During the early 1970s in A.I.D., the focus of evaluation efforts was frequently a comparison between actual project achievements and design targets and objectives. With this type of evaluation focus, conceptual problems frequently arose because designs often became irrelevant as a result of unanticipated and changing circumstances in the rural environment. Another problem with such a simplistic evaluation focus on achievement of design targets was that most project designs were "sales" documents with over-optimistic assumptions and over-ambitious objectives. Such an approach tended to result in too negative an assessment of project performance.

Today, there is a growing realization that evaluations need to reconsider the validity of the original design assumptions and targets. In fact, current A.I.D. evaluation guidance stresses that ongoing evaluations, implemented in a flexible "trouble-shooting" style, should become a key instrument in the process of project redesign, reorienting a project's operations, strategies, and targets to accommodate the changing rural circumstances and growing knowledge of the project environment.

A second conceptual issue relates to the tendency for monitoring and evaluation reporting in A.I.D. to focus unduly on monitoring concerns, such as whether funds were being disbursed or whether construction and training was proceeding on schedule. Ongoing evaluation of the actual development results, such as adoption of technology, and reactions of and impacts on intended beneficiaries, was too often ignored, with unfortunate consequences. Reasons for these tendencies included the typical project manager's perspective that his or her performance evaluation and career depended more on achieving immediate implementation targets than on attaining far-off and difficult-to-prove development. Also, while guidance stressed impact evaluation, the primary methodology offered was impractical and costly. Moreover, it did not offer timely information on intermediate impacts that project management might have been able to effectively use to make mid-course project strategy corrections.

Another conceptual issue concerns the appropriate time frame for assessing development impacts. On the one hand, project managers required preliminary feedback on initial impacts as early as possible during project implementation. Yet the rigid statistical evaluation designs in vogue during the 1970s did not produce definitive results on impacts until project

completion or even later. On the other hand, long-term sustainability of project services and benefits after project completion has been a growing concern in A.I.D. From the viewpoint of those concerned with sustainability, traditional impact evaluations tended to take a relatively short-term perspective.

There are several dimensions to sustainability in the rural development project context, including (1) maintenance of project infrastructure and service delivery, (2) continuation of benefits, and (3) preservation of the natural resource base for sustainable agricultural productivity. As yet, A.I.D. has no agreement on appropriate measures of sustainability. Should they be the same indicators used to assess development impacts, only observed over the longer term after project completion? Or should there be an additional set of indicators more concerned with assessing the maintenance aspects of project operations and the development of indigenous institutional capacity and financial self-sufficiency? Should a set of indicators be developed that captures the significance of changes in environmental conditions (e.g., quality of soil, water, and other key resources) for continued agricultural productivity?

Finally, the traditional experimental impact evaluation design (see Section 5.2) tended to be too narrowly focused on measuring project impacts while ignoring project-related and contextual factors that might have been responsible for successful or poor project performance. Thus, evaluation findings rarely had much operationally useful advice for managers on the effectiveness of alternative project approaches. Also typically missing in A.I.D. impact evaluations was a consideration of project costs in relation to impacts achieved; without such cost-benefit analysis, evaluations could offer little guidance on choosing among alternative project approaches.

In conclusion, the conceptual focus of A.I.D. impact evaluations during the 1970s tended to be relatively narrow and rigid, given the realities of the little-understood and constantly changing rural scene. The existing evaluation methodologies did not meet the needs of project managers for flexible and responsive tools to gauge a wide variety of evaluation issues and beneficiary responses and impacts in a timely manner.

5.2 Methodological and Data Collection Aspects

During the 1970s, A.I.D. evaluation guidance placed considerable emphasis on the use of statistical research designs that were to quantify impacts and scientifically prove their causal relationship to a specific project intervention -- that is, experimental and quasi-experimental designs. In practice, most projects did not undertake such evaluations because of their impracticality, complexity, and cost. In the few cases in which such statistical research designs were initiated, their results were often disappointing for the following reasons:

- They depended on multiple rounds of sample surveys, data processing, and analysis that was very costly.
- They required rigorous statistical and data collection skills typically beyond the capabilities of indigenous and donor staff.
- They required a long time frame to complete, taking several years, often well beyond the project's funding life span. They were thus of little practical use for project managers concerned with improving implementation and were difficult to fund within the project's context. For these reasons, many of these efforts were never completed despite initial baseline efforts.
- There were inherent methodological weaknesses in attempting to apply experimental designs to rural conditions in developing countries. The variety and complexity of extraneous factors were constantly impinging on the project setting, resulting in inconclusive statistical results in terms of proving impacts and causality, despite large expenditures on surveys.
- The findings of such evaluation designs frequently did not address many of managers' concerns about identifying the factors responsible for project success or failure. Thus, while perhaps useful for "accountability" purposes (i.e., A.I.D. could give Congress examples of projects with successful impacts), there was minimal operational value in these evaluations concerning lessons for improving project performance or for future design of similar projects.
- The method's emphasis on quantification tended to ignore goals that were not easily quantified, such as institutional development, and also bypassed unanticipated outcomes.
- The statistical research design approach, in its concentration on measuring narrowly defined impacts, frequently ignored important evaluation issues, such as the continued relevance of the initial design objectives, the measurement of intermediate effects, cost-effectiveness and sustainability issues.

Disregarding the difficult issue of proving causality, even establishing a definitive statistical trend was not an easy evaluation task. For example, determining whether there had been a 5-percent growth rate in agricultural production with some degree of statistical confidence in an environment with 15- to 20-percent seasonal variation (typical of irrigated areas) required data for at least a 10-year period. The situation was even worse for rain-fed areas with greater seasonal variation and for situations with high sampling and measurement errors.

Neither of the two research strategies (experimental and

quasi-experimental designs) for establishing causal relationships between impacts and project interventions were very practical.

The experimental design approach of randomly assigning and withholding project services was often not possible in the context of many rural development projects. The alternative, the quasi-experimental design approach, required identification of a control group with attributes and environmental conditions that matched those of project beneficiaries. Finding a "perfect" control group was often difficult if not impossible, and the possibility of other project interventions or factors influencing the control group during the period of study further complicated attempts to establish causality.

In addition to the often disappointing results of these complex and costly evaluation designs, the larger tragedy was that by emphasizing this "ideal" impact evaluation approach, little attention was given during much of the 1970s to alternative evaluation approaches. As a result, there was a void in terms of guidance for practical, low-cost evaluation methods to meet management's information needs for quick feedback from beneficiaries and an overabundance of "monitoring" documents in relation to "evaluation" reports.

Since the early 1980s, A.I.D. has made considerable progress in reversing some of these earlier methodological problems. While still supporting experimental designs in select cases, such methodologies are widely understood to be unsuitable for the evaluation of all projects. Today there are increasing efforts to provide guidance on a variety of practical, rapid, and low-cost evaluation methods more applicable to project management's information needs and resource availability and more attuned to the realities of the rural project setting. In general, these approaches are more informal and less statistically rigorous. Although some of these techniques still involve gathering quantitative information, there is less emphasis on obtaining representative data and formally proving causality (i.e., statistical attribution of net impacts resulting from specific interventions). Instead, easier-to-gather "proxy" indicators are increasingly being used to establish the overall development progress and trends, and a more qualitative process approach is being taken to examine the logical linkages between the project's outputs and impacts on these overall trends and to explore alternative possible explanations of causes.

These low-cost, rapid reconnaissance techniques for gathering information about projects and their beneficiaries include the following:

- Administrative records. Simple, yet carefully and innovatively designed record systems can be used to regularly monitor project progress and costs against design plans, targets, and schedules. Moreover, they can also be very useful for keeping basic information on users of project services such as their socioeconomic status, repeated use of services, repayment profile,

and other pertinent information. Assessment of trends found in these data records can be used to flag problems as they occur (e.g., no repeat users, smallholders are not using services) and target them for further study.

- Small sample surveys. To gain information on respondents' initial responses and perceptions, inexpensive mini surveys, with samples as small as 100 respondents, can be used to measure the numbers and proportion of the target population who have access to and are using project services. However, the number of questions and variables must be strictly limited if sample size is kept small.
- Proxy indicators. Rather than direct measurements of changes in project outcomes, sometimes more intermediate, or proxy, indicators provide sufficient information on results at lower cost. For example, proxies for agricultural production might include changes in the volume of commodities passing through markets, estimates of commodity supplies from traders or other key informants, and changes in prices as an indicator of changes in supply. Proxies for increased income might include improvements in housing quality or furnishings or other evidence based on expenditure data.
- In-depth beneficiary information. Project experience has repeatedly indicated that failures are often due to a lack of understanding of the perceptions and the local context of the intended beneficiaries. Informal survey methods, such as questioning key informants, holding focus group or village meetings, and observing selected participants as case studies can be inexpensive and provide rapid feedback of useful information for project management's operational decisions. These methods emphasize understanding why and how the project implementation process is influencing beneficiary access, adoption, and response to project services. These methods are not overly concerned with measuring quantities, although such interviews may convey some sense of the perceived average impacts on farmer production and net incomes of adopting project technologies and services. Moreover, statistical representativeness is not considered critical in such techniques, and half a dozen group interviews or in-depth interviews with 30 to 50 beneficiaries may be sufficient to draw valid conclusions for management decisions.

5.3 Organizational and Management Aspects

Monitoring and evaluation responsibilities within rural development projects tended to be handled through organizational alternatives that were closely linked to the more general organizational choices made to manage project implementation.

These approaches and their strengths and weakness are outlined below.

- Working with existing statistical units. Projects implemented by government agencies typically worked with the existing statistical units to handle the project monitoring and evaluation functions. This approach provided excellent opportunities to strengthen indigenous institutional capabilities for data collection, monitoring, and evaluation that benefited not only the project at hand but other ongoing and planned projects under the jurisdiction of the ministry. However, institution building proved to be a slow and difficult process that often jeopardized the quality and timeliness of the evaluation effort.
- Establishing a special monitoring and evaluation unit. When project management units were established outside government bureaucracies, they sometimes established a special monitoring and evaluation office. The advantage of this approach was that the project could hire specialists and concentrate on producing high-quality monitoring and evaluation systems for the project while avoiding all the problems typically associated with working in existing government bureaucracies, such as competing job demands, low-quality staff, and budget constraints. However, opportunities for building institutional capacity in evaluation skills and for coordinating activities with other project efforts were lost. This approach may even have harmed existing ministry statistical units by competing with them for scarce staff. Furthermore, experience proved that the monitoring and evaluation units, perhaps even more than the semiautonomous management structures of which they were a part, lacked sustainability.
- Assigning monitoring and evaluation responsibilities to the project management team. In many cases, responsibility for project monitoring and evaluation was assigned to the project management team, but without the creation of a special unit. This approach was low in cost and advantageous when project monitoring and evaluation requirements were minimal and routine and could be adequately performed on a part-time basis or with the assistance of part-time consultants. The major disadvantages of this approach were that project staff tended to give monitoring and evaluation functions low priority because of pressing implementation concerns and frequently had limited data-collection and evaluation skills.
- Having no built-in project monitoring and evaluation capabilities. A final category, which was perhaps relied on too often, included projects that made little or no provision within project planning, funding, or staffing for the evaluation function. Evaluations for such projects were typically centrally funded and

implemented in an ad hoc manner, usually with outside consultants. Because they came and went quickly, spending little time with the project, such evaluation teams typically were able to find little data to work with. This approach sometimes suffered from project management's disinterest in the evaluation function, which they perceived as separate from their information needs, or worse as an external A.I.D./Washington oversight function to be feared and avoided.

Various A.I.D. reports on project monitoring and evaluation have cited project management's misperceptions of their roles, responsibilities, and objectives regarding monitoring and evaluation efforts as a major cause of the failure of many such efforts during the 1970s. Typically these managers had little input in defining the evaluation issues, posing the questions, or establishing the operational context or time frame for the evaluation efforts. As a result, the evaluation findings were too rarely used.

In addition, some project managers viewed monitoring and evaluation efforts as a form of surveillance by the donor agency or ministry concerned, which was just waiting to pass judgment on their performance. This view was especially prevalent in external evaluation efforts that operated outside the project managers' direct control and reported to higher management levels. Matters were made worse when elaborate impact evaluation methods were imposed from the outside, methods that project management tended to view as irrelevant to their information needs. Under these circumstances, project management took little interest in or responsibility for guiding monitoring and evaluation activities or in using the evaluation information that was generated. They tended to leave evaluation to the "experts."

Criticisms of monitoring and evaluation operations indicated that A.I.D. project design teams were generally giving insufficient attention to adequate planning of monitoring and evaluation systems, to setting priorities for information needs, and to estimating monitoring and evaluation staffing and support costs. Follow-up technical assistance and training efforts for project monitoring and evaluation staff were also found to be lacking in many cases. Technical advisers who were assigned monitoring and evaluation responsibilities often lacked skills in evaluation methods or pertinent experience. Even the "experts" were a mixed blessing, because they often held unrealistic standards for rigorous statistical surveys and research design and had little appreciation of the types of information required by management.

Although many of these problems have no easy solutions, recent A.I.D. evaluation guidance has made great progress in reorienting project monitoring and evaluation functions toward serving the project managers' information needs for operational decisions and improved project performance.

During the early 1980s, there was a growing understanding based on experience that to improve the quality of evaluations and their relevance to management, responsibility for evaluation

tasks should be functionally and organizationally placed as close as possible to the appropriate management decision-making point. In practice, this meant that responsibility for monitoring and evaluation systems for individual projects had to be decentralized and controlled by project management teams, rather than by oversight units.

The 1980s saw a reorientation of monitoring and evaluation systems and reporting requirements to support project management's information needs for operational decisions. A.I.D./Washington dropped its requirement for routine annual evaluation reports and standard formats. Instead, the emphasis was put on continuous, ongoing evaluation to serve project management's information needs, and special interim evaluations were timed to meet key management decision points. A.I.D. guidance emphasized management's responsibilities in determining the purpose of the evaluation, questions to be answered, and timing to coincide with the project's operational decision points or problems. Evaluation scopes of work were to identify the evaluation questions managers wanted answered and to include recommendations for management actions and findings. The scopes of work were to be reviewed and approved by management, and evaluation team planning meetings were to stress the interaction of the team with management.

Furthermore, recent guidance has stressed the need to explicitly plan and fund monitoring and evaluation activities at the project design stage and to treat monitoring and evaluation as a special project component. In addition, there has been growing recognition that monitoring and evaluation functions, just like other project components, require technical support and training to become institutionalized.

Recent evaluation guidance has stressed the importance of collaborative evaluation efforts involving host country personnel. While indigenous personnel have typically been involved in monitoring functions, their involvement in evaluations has until recently been less frequent, especially in post-project evaluations, which were frequently done by expatriate teams. Experience indicates that the lack of host country involvement in the evaluation function has resulted in the loss of valuable opportunities for building local evaluation capacities, for drawing on the special country expertise of indigenous personnel, for increasing host country understanding of evaluation efforts, and for enhancing the likelihood that evaluation findings and recommendations will be followed by the host government. In the last 2 years, about one-third of A.I.D. project evaluation efforts have involved host country collaboration. Some of the reasons collaboration is being promoted include the following:

- Involvement of local experts can improve the quality of evaluation results because indigenous personnel often have a superior understanding of important sociocultural, contextual, and policy factors, as well as knowledge of the local language.

- Host country involvement will enhance the developing country's institutional capability to conduct evaluations in the future. Thus, not only is the project's monitoring and evaluation function more likely to be sustained, but the benefits may extend beyond the immediate project being evaluated to include future projects and programs.
- Involvement in and understanding of evaluation efforts may increase the likelihood that host governments will accept and act on findings and recommendations.
- As donors undertake more ongoing evaluation efforts within project management structures, the use of local staff becomes more necessary and economical.

At the project level, monitoring and evaluation has typically been of interest to project managers as a source of information for improving project implementation. However, since the early 1980s there has also been an increasing emphasis within A.I.D. on the evaluation needs of senior Agency management. In particular, A.I.D.'s more senior management levels have required comparative evaluation studies that aggregated and synthesized experience across multiple projects within a particular sector or focused on a specific crosscutting issue in order to guide broad program, sector, or policy decisions facing the Agency.

Examples of ways in which comparative evaluation studies could benefit management decision-making include the following:

- Influencing the Agency's resource allocation decisions among sector or subsector project approaches
- Influencing Agency assistance policies, procedures, and modes of operation so that guidance reflects experience
- Improving new project designs
- Serving an accountability function by showing Congress and constituencies that aid expenditures are achieving the desired results

During the 1980s, A.I.D.'s growing recognition of the need for such comparative evaluations led to the establishment of a central evaluation office responsible to senior policy and program management -- the Center for Development Information and Evaluation (CDIE).

The CDIE evaluation studies series basically took two approaches. First, CDIE began to do more comparative analysis and synthesis of existing project evaluation documents, usually focusing on findings in a particular sector or on a crosscutting issue. Synthesizing and aggregating evaluation results across a series of projects created new methodological problems and, to some extent, conflicted with evaluation guidance encouraging a diversity of evaluation methods to reflect the diverse needs of

project managers. The problem was particularly severe in agricultural and rural development projects, where program approaches were particularly diffuse, were focused on multiple objectives, and had no standardized evaluation methods or progress indicators. For example, CDIE syntheses of existing evaluations typically used qualitative approaches or attempted to rate project performance according to broad categories based on subjective review of evaluation documents. Such efforts were further complicated by the tendency of existing documents to focus on monitoring concerns rather than development results. Despite these methodological problems, evaluation syntheses of existing documents frequently provided useful insights of operational relevance for A.I.D. managers about sectoral strategies and project approaches at very low cost and with quick turnaround.

A second, more expensive, and longer term approach, but one that offers more control over the comparability of evaluation focus and methods, involved undertaking a series of centrally directed field evaluations. This was the approach taken in the A.I.D. impact evaluation series, which was begun in 1979. Although referred to as "impact" evaluations because of their focus on assessing the developmental results of projects, they were not traditional, formal impact evaluations based on experimental designs or rigorous, multiple data collection efforts. Instead, they were based on an investigatory approach wherein a multidisciplinary team was sent to the project site after project completion to evaluate the project over a several-week period. Usually such evaluations did not involve any rigorous sample survey efforts, but instead employed more informal and qualitative techniques such as unstructured interviews of beneficiaries, field observation, and discussions with experts and informants. Also, their focus extended beyond impacts, narrowly defined, to include other aspects of project performance and operationally useful "lessons learned" about factors influencing projects success. After a series of about six to eight such field project evaluations, a synthesis program evaluation report would be prepared that summarized findings and lessons across the projects.

Numerous CDIE evaluation studies have been published that have summarized findings and lessons concerning the Agency's rural development efforts. These include program reviews of irrigation, agricultural research, agricultural services, small farmer credit, integrated rural development, land settlement, livestock, rural roads, rural potable water systems, and rural electrification (see Bibliography). In addition, several studies of crosscutting issues have been completed with special relevance to agricultural and rural development projects, such as special studies of development management problems and of women-in-development issues.

As with project-level evaluations, these broader, comparative evaluation synthesis studies are also being underutilized by management because of such difficulties as the following:

- Getting busy senior managers to read lengthy evaluation reports

- Drawing operationally applicable lessons from the evaluation experience
- Getting evaluation lessons into the project design process in a decentralized system in which most responsibilities for project design and approval are delegated to field Missions
- Developing appropriate "accountability" indicators of program-level performance and impacts, especially in the agricultural sector, that could easily be compared and summarized across projects, while still being fairly easy to collect and meaningful to senior Agency management and the Congress

Solutions to these utilization problems remain difficult, but CDIE has made some progress in encouraging greater application of evaluation findings in the Agency's diverse management decision-making process. Some of the approaches taken include the following:

- Preparation of short abstracts of evaluation report findings and of special memorandums for senior management highlighting implications of evaluation lessons for specific program and policy decisions
- Making greater use of the Agency's oral communication tradition by holding evaluation workshops, seminars, and meetings to disseminate lessons from experience
- Preparing specially tailored "project manager's references" on specific agricultural subsectors to provide guidance for design efforts based on evaluation experience
- Developing a CDIE Research and Reference Service of individuals who are on call to assist project designers by gathering and synthesizing relevant past experience
- Establishing the CDIE Development Information System, an automated reference system that tracks and indexes all relevant and readily available A.I.D. project documentation, including evaluation reports, for Agency management use in Washington and the field
- Establishing an Economic and Social Data Base in CDIE that tracks development progress at the macro or national level for all A.I.D. recipient countries, and increasing efforts to develop practical and appropriate program-level indicators of progress and performance

6. CONCLUSION

This review of A.I.D.'s evaluation experience with rural development projects has highlighted some of the issues, problems,

and opportunities encountered in the design and implementation of rural, poverty-focused interventions. The paper has concentrated on those factors affecting project performance and impact that are within the control of or most readily influenced by the donor agency and its project management. Many lessons have been learned over the years about appropriate donor modes of operation and approaches to project management, organization, technologies, design, monitoring, and evaluation in a rural development context. Rarely are there simple answers or single "right" approaches that apply to all project environments. Rather, there is often a whole array of possible approaches to choose from, with the appropriateness of the approach dependent on the local context and the project's goals and emphases. Often it is some combination of approaches that best suits the circumstances.

Much has been learned about how the appropriate choice among a range of options depends on an analysis of how a particular project's goals, priorities, and functions best relate to the specific local conditions in which the project must operate. To reiterate some of the key issues addressed in this paper:

- The organizational entity for implementing the project may be selected from a continuum of public-private options, from government line ministries to commercial firms. The appropriate organizational choice depends on such factors as the type of project (e.g., policy planning projects are best located within government ministries); its scale and complexity (e.g., very large-scale projects may require government operation); and its goals and priorities (e.g., emphasis on sustainability may rule out establishing project management units; financial cost-recovery or self-sufficiency objectives may favor private sector involvement). Also, the choice of organization should be influenced by an assessment of relevant local conditions, such as the institutional capacities of existing public and private organizations and the regulatory and policy environment.
- Local participation in project management decisions may vary from actively participating in project decision-making to simply responding to project efforts to gather beneficiary information and perspectives. The type of local participation necessary and appropriate for a particular project depends on such factors as the type of project (e.g., rural infrastructure projects appear to require more active local participation than local other project types), the presence or absence of viable organizations, and cultural and political attitudes toward participatory activities.
- Project technologies may vary from complex, large-scale systems to more modest, locally based technologies. Appropriate choice of technology depends on such issues as beneficiary perspectives on its value and reliability

and their consequent willingness to support operations and maintenance costs; the ultimate profitability of the system; its dependence on external support for essential fuels, repairs, and spare parts; and its long-term compatibility with the natural ecosystem and resource base.

- Project design approaches may range from highly structured blueprints to very flexible rolling or process designs. Factors influencing the appropriate degree of flexibility/specificity for a particular project include the amount of change and unpredictability in the project environment, the innovativeness of the project, and the management and institutional capacities of the implementing agency. For example, more flexible designs appear more appropriate in situations in which little is known about the development problem or appropriate implementation approaches, considerable change is anticipated in the project environment, sufficient management capacity exists to handle additional staff requirements, or technical assistance and institution building are key project goals. Early phases of rural development efforts in general require more flexible design approaches that allow for pilot testing phases and that emphasize building institutional capacities. If successful, such test phases may then be followed by more structured, larger scale projects with more capital inputs and emphases on production goals and widespread impacts. A third phase could then concentrate on strategies for ensuring successful sustainability after project completion. This phase requires a long-term perspective and commitment on the part of the donor agency to rural development efforts beyond the traditional short project lifespan.
- Project complexity may vary from simple, narrowly focused activities to highly complex, multisectoral integrated approaches. The appropriate degree of integration at the project level depends on such factors as the project's objectives (e.g., local institution-building projects and projects requiring quick, significant results results in a particular geographic area may benefit from integrated rural development approaches); the prevalence of interinstitutional coordination in the society (e.g., if constraints to cooperation are typical, projects with simpler or narrowly focused activities should be favored); and the strength of the interdependence of related activities (e.g., activities that are highly interdependent on each other for their mutual success may benefit from project-level integration). In general, however, experience indicates that integration of related activities and sectors can best be accomplished at a strategic planning level, while keeping the focus of individual projects relatively narrow or simple.
- Project evaluation approaches may vary from rigid, statistically based research designs to informal, qualitative information-gathering approaches. The

choice among these approaches depends on the nature of the evaluation questions and the importance of obtaining statistically representative and valid data versus quick and inexpensive feedback for management decisions. In general, the more informal "rapid rural appraisal" techniques best suit the needs of project-level management; however, sometimes more elaborate impact evaluation designs or comparative, quantitative studies are useful to central, senior Agency management needs.

In sum, this paper argues that there are rarely simple or universally applicable approaches that are equally appropriate in all project contexts. Yet the paper optimistically concludes that enough has been learned from experience over the years to begin to discern patterns and to provide guidance concerning the relevant issues to raise and analyze in order to arrive at appropriate choices.

This paper has not focused directly on factors external to a project that may affect a project's performance and impacts. Yet it has shown that even the effectiveness of so-called "project-related" factors that are within the control of donor agency and project management are inevitably affected by their appropriateness to local contextual conditions. These external factors, which are beyond the direct control of the donor agency and its project management, are now recognized by many to be critical to successful project performance. In many cases, the receptiveness of the host country's policy environment to rural development has been especially critical to project success and has been the focus of growing Agency efforts in effecting policy reform through conditionality provisions attached to nonproject assistance. Other inherent difficulties remain in focusing on impoverished, often isolated rural areas, with limited natural and human resources. These and other critical external factors were the topics of other sessions of the Rural Development Seminar.

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